
Tone and Digit Switch Diagnostic (LD 34)

The Tone and Digit Switch and Digitone Receiver diagnostic program (LD 34) tests packs used in generating and detecting tones in the SL-1 system. Response to commands for the Dial Tone Detector card are output as DTD messages. Response to commands for the Tone and Digit Switch card are output as TDS messages.

TDS messages

TDS0000	Program identifier indicating that the program has been loaded.
TDS0001 loop	TDS loop has incorrect Digitone cycle. Outputting from that TDS may be faulty, or 100 ms Digitone burst is being used in a system defined for a 50 ms operation or vice versa.
TDS0002 loop	TDS loop is transmitting erroneous Digitone frequencies. Digitone outputting from that TDS will be faulty. Minor lamp is lit on attendant console.
TDS0003 loop	20 pps outputter on TDS loop L has bad timing or is not producing the correct number of pulses per request. 20 pps outputting is faulty.
TDS0004 loop	10 pps outputter on TDS loop has bad timing or is not producing the correct number of pulses per request. 10 pps outputting is faulty.
TDS0005 loop	An outputter on TDS loop did not complete a digit. 10 or 20 pps outputting is faulty.
TDS0006 loop	All outputters on TDS loop have been disabled due to a system I/O interface fault. Minor alarm lamp lit on attendant console.
TDS0008 loop	The Digitone pulse on TDS loop did not complete cycle. Digitone outputting is faulty. Minor alarm lamp is lit on attendant console.

TDS

TDS0010 loop	Channel errors. Bad channels are disabled. Capacity of TDS is reduced. Outpulsing and/or tone faults may occur.
TDS0011 loop x	The Tone Detector is unable to detect tone x generated by TDS loop L. Where x): 1 for Dial Tone 2 for Busy Tone 3 for Overflow Tone 4 for Ringback Tone 5 for Test Tone
TDS0012	Loop is not an active TDS. It is disabled. Pack must be enabled prior to testing. This code will only occur with a test that is invoked manually.
TDS0013 loop	TDS not allowed in that loop. Action: Use LD 17 to change system configuration.
TDS0014 loop	Tone path could not be established to tone and digit loop. Action: Check for disabled slots on pack (STAT L). If none disabled, try later when traffic is reduced.
TDS0015 loop	TDS loop is not responding. Minor alarm lamp is lit on attendant console. Action: Replace card. If the fault persists, suspect: 1. other tone and digit switch 2. Peripheral Signaling (PS)
TDS0016	TDS is already enabled.
TDS0017	No TDS available for Digitone receiver testing.
TDS0018 XX YY	Bad timing on Fast TDS.
TDS0019	Outpulsing not completed on FAST TDS.
TDS0020	Digits sent do not match digits received or the number of digits entered for TABL is incorrect.
TDS0021	Invalid unit used with DTR, ENLR or DISR command. Action: Use even number unit only. Each Digitone Receiver uses TN pair.

TDS0032 loop	Card not responding.
TDS0100 I s c	The specified Digitone receiver has been disabled due to lack of response or faulty operation. Action: Replace indicated card. Suspect faulty TDS if fault persists or if more than one Digitone receiver is shown faulty. Minor alarm lamp lit on attendant console. Card is disabled only if 50 percent of system Digitone Receivers (DTRs) have not already been disabled. This failure rate will always leave 50 percent of Digitone Receivers enabled, regardless of performance.
TDS0101 I s c	Specified Digitone receiver has been disabled due to loss of speech transmission capability. As for TDS100.
TDS0102	Digitone receiver requested is busy. Action: Try again later.
TDS0103	TN specified is not equipped to be a Digitone receiver. Action: Check data.
TDS0104	No Digitone Receiver found.
TDS0105 I s c	The specified Digitone Receiver has been disabled due to a failure to detect A, B, C, D digits. Card is disabled only if 50 percent of system Digitone Receivers have not already been disabled. This failure rate always leaves 50 percent of Digitone Receivers enabled. Action: Suspect faulty TDS if fault persists, or if more than one DTR is faulty. Minor alarm lit on attendant console.
TDS0120	The ANN command cannot be used.
TDS0121	The source number is out-of-range (1-8).
TDS0201	The last request is not finished executing. Only END is allowed. The END will terminate the execution. Action: Wait until test execution has finished.
TDS0202	Invalid parameter. Wrong number of parameters for this command.
TDS0203	Invalid command.
TDS0204	Loop is out-of-range. Loops 0 to 159 only are allowed.
TDS0205	Shelf is out-of-range.

TDS0206	Card is out-of-range.
TDS0207	Unit is out-of-range (0 to 1).
TDS0208	Command requested is allowed only from an SL-1 telephone. Tones or outpulsing cannot interact with a TTY. Action: Use SL-1 maintenance set telephone to enter command.
TDS0209	Customer does not exist.
TDS0210	Card does not exist in data base.
TDS0212	Requested trunk type that uses the desired outpulser is not available. Action: Be sure the system contains the desired trunks. If they exist, all trunks in that category may be busy or unequipped.
TDS0301 I s c (u) x	The specified tone detector has been disabled due to faulty operation or lack of response, where x and y indicate the mode and test it has failed. The rest of the testing is aborted. X Y Mode 0004, 0001, Mode I Precise Tone 0004, 0003, Mode I Tone Duration is greater than 50 ms 0004, 0005, Mode I Tone Duration is greater than 300 ms 0004, 0005, Mode I Tone Duration is greater than 300 ms, Tone is turned off at 256 ms 0005, 0001, Mode I Precise Busy Tone 0005, 0003, Mode I Non-Precise Busy Tone 0006, 0001, Mode I Precise Overflow Tone 0006, 0003, Mode I Non-Precise Overflow Tone 0006, 0005, Mode I Tone Duration is less than 300 ms 0007, 0001, Mode I Ringback Tone 0007, 0003, Mode I Any Tone 0008, 0001, Mode I Special Common Carrier Dial Tone 0009, 0001, Mode I Unidentified Tone 0009, 0003, Mode II Unidentified Tone 0009, 0005, Mode IV Test Tone 0009, 0007, Mode III Test Tone

0009, 0009, Mode III Test Tone (Tone is turned off at 5.5 s)

000A, 0001, Mode V Single Frequency Tone

000A, 0003, Mode V Dual Frequency Tone

TDS0302 I s c (u) The specified tone detector has been disabled; unable to perform self-test.

TDS0303 I s c (u) Terminal number specified is not designated as a tone detector.

TDS0304 No TDS is available for tone detector testing.

TDS0310 Tone detector (TDET) package is restricted.

TDS0311 I s c (u) Specified TN is not an MFR.

TDS0312 No MFR units are configured.

TDS0313 Some units of MFR card are busy, test not done.

TDS0314 No MFS available for MFR test.

TDS0315 I s c u MFR unit is busy. Test not performed.

TDS0316 MFR is disabled due to faulty operation.

TDS0317 Digitone Receiver's (NT8D16) Peripheral Controller (NT8D01) is disabled, nothing is performed.

Action: Use LD 32 to enable the card.

TDS0318 Superloop number must be a multiple of 4.

TDS0319 Digitone Receiver (NT8D16) failed self test.

Action: Replace the Digitone Receiver.

TDS0320 Digitone Receiver (NT8D16) does not respond.

Action: Check Digitone Receiver and the Network Card/Peripheral Controller (NT8D04/NT8D01) communication path to the card for a fault.

TDS0400 FTC Table 0 used for tone tests.

TDS0411 Dialtone Detector package is not equipped.

TDS0412 Dialtone Detector and Tone Detector packages are not equipped.

TDS0500 ANN command cannot be used because the Message Intercept (MINT) package 163 is not equipped.

TDS

TDS0501	Source number out-of-range. Only 8 external sources (1 to 8) can be defined for testing.
TDS0502	ENLX (Enable) or DISX (Disable) commands are only used on Conference/TDS/MFS cards.
TDS0503	The Conference/TDS/MFS card is already enabled/disabled.
TDS0504	Received an unexpected message from the Conference/TDS/MFS card. Action: Use the DISX command to disable the card and retry the ENLX command to enable the card.
TDS0505	The Enable command (ENLX) did not receive the down-load complete message within 6 seconds.
TDS0506	Tone or cadence number is out-of-range.
TDS0507	The TLP Supplementary package is not equipped.
TDS0508	The SSD scanning message received no response from the DTR/XDTR. Action: The faulty DTR is disabled.
TDS0511 I s c u x	DTR/XDTR fails to respond to SSD scanning message for "x" times prior to the DTMF tone detection test.
TDS0512 I s c u x d	DTR/XDTR fails to detect the "d" digit for "x" times prior to the DTMF tone detection test is testing.
TDS0513 I s c u x	DTR/XDTR fails to detect all the digits for "x" times when the DTMF tone detection test with the fast TDS is testing.
TDS0514 I s c u x	DTR/XDTR fails to pass the digit through for "x" times when continuity test is testing.
TDS0520	DTR and TDS commands are not supported for slot 0. Action: To test these devices you can do a DISX 0 and then ENLX 0.
TDS0521	Equipment cannot be enabled due to disabled Tone and Digit Switch (TDS). Action: Use OVL 34 to enable before proceeding.
TDS0522	New MFC/MFE/MFK5/MFK6 units on Card 0 can only be enabled by ENLX in LD 34. Action: To enable these units, go into LD 34 and perform ENLX 0.

- TDS0827 Multiple SSD messages of the same DTMF digit are received from the same NT8D16 Digitone Receiver during a DTR or TDS test in LD 34.
Action: If this problem occurs every time, replace the card.
- TDS0828 loop Attempting to enable Conference/TDS card during midnight routines.
- TDS0829 A command with the same functionality is supported in Overlay 32.